

Amendment to the Claims

1 – 40. (canceled)

41. (previously presented) A method for transferring data on a network from a data source to an end station executing a multi-layer network protocol, including a network layer and at least one higher layer, through a network interface on the end station, comprising:

receiving in the network interface a packet which carries a data payload from a block of data in the data source, and a control field identifying the packet;

determining based on the control field in the network interface whether the packet matches a transmit control block (TCB), and if so transferring the data payload in the packet directly to a target buffer assigned by a process at a layer higher than the network layer.

42. (previously presented) The method of claim 41, wherein the control field in the packet includes a packet header.

43. (previously presented) The method of claim 41, wherein the multi-layer network protocol comprises TCP/IP, and the control field comprises a TCP/IP header.

44. (previously presented) The method of claim 41, including prior to receiving the packet, allocating the target buffer for a plurality of packets, and notifying the network interface of the allocated target buffer.

45. (currently amended) The method of claim 41, wherein the network interface is coupled to a network medium supporting a maximum packet size, and including transmitting a request from an application for transfer of a block of data from the data source, the block of data having a length potentially greater than the maximum packet size for the medium.

46. (currently amended) The method of claim 45, including notifying the network interface in response to the request of a the TCB for the block of data according to the multi-layer network protocol, and wherein the step of receiving the packet includes identifying packet using the TCB.

47. (currently amended) The method of claim 46 44, wherein the network protocol comprises TCP/IP, and the TCB includes a sequence number of a first byte from the plurality of packets to be stored in the target buffer.

48. (currently amended) The method of claim 44 45, wherein the TCB includes a sequence number for the block of data.

49. (previously presented) The method of claim 48, wherein the TCB includes IP source and destination addresses and TCP port numbers.

50-59. (canceled)